



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/743,688

12/15/2003

Shawn A. Ruden

STL11384

8139

7590 08/21/2009  
Fellers, Snider, Blankenship,  
Bailey & Tippens, P.C.  
Suite 1700  
100 North Broadway  
Oklahoma City, OK 73102-8820

EXAMINER

TUGBANG, ANTHONY D

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

08/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/743,688	<b>Applicant(s)</b> RUDEN ET AL.	
	<b>Examiner</b> A. Dexter Tugbang	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19 and 21-41 is/are pending in the application.
- 4a) Of the above claim(s) 24,25,28,29,34,35 and 37-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19,21-23,26,27,30-33 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 3, 2009 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Election/Restrictions***

**Claims 24, 25, 28, 29, 34, 35 and 37 through 41 continue to remain as withdrawn** from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the replies filed on August 8, 2007 and December 23, 2008.

### ***Claim Rejections - 35 USC § 103***

**Claims 19, 21, 26, 27, 30, 31 and 36, are rejected under 35 U.S.C. 103(a) as being unpatentable over McKenzie et al in view of Watanabe et al.**

McKenzie discloses a method comprising: providing a rotatable hub (e.g. 404) with a central axis (in Fig. 6), the hub supporting a disc member (e.g. 402) having an annular track (from servo track writing, STW) with a center of rotation offset from the central axis (as a result

Art Unit: 3729

of gap 409); and imparting a bias force on the disc member to align the center of rotation of the track (e.g. STW on the disc surface) with the central axis of the rotatable hub by contactingly engaging the disc member with a flexible cantilevered finger (e.g. solenoid plunger with a soft tip) of a biasing tool (col. 6, lines 28-37).

It is noted that in McKenzie when the innermost surface of the central mounting aperture of the disc is in direct contact with the outer cylindrical surface of the hub, the center of rotation of the track is axially aligned with the central axis of the hub, *as a line of axis can most certainly be drawn from the central axis of the hub to the center of rotation of the track*. The relationship of “axially aligned” (last line of Claim 19 and last two lines of Claim 30) is not limited to any particular type of alignment or any particular angle. Therefore, any line drawn between the center of rotation of the track and the central axis of the hub *during contact* can be said to be “axially aligned”.

With respect to Claim 30, McKenzie discloses that the disc member (e.g. 402) is provided with at least one annular track (e.g. STW) having a track center (i.e. center of the ID of the disc member).

Regarding Claim(s) 26, 27, 36 and 37, McKenzie further teaches that the finger comprises a proximal end (narrowed end portion of 412), which extends from a main body portion in a first direction (e.g. horizontally to the right in Fig. 6), and a disc engagement region (e.g. the OD of the disc 402), which extends from a distal end of the finger during contact in a second direction (substantially normal direction, as a result of the rotation of the disc).

With respect to the detailed recitation of the biasing tool imparting a biasing force “to bring an innermost...the hub”, this feature is an obvious effect of the biasing force of McKenzie

Art Unit: 3729

as certainly shown by McKenzie in Figures 3 and 4. Here, McKenzie uses a gap on one side of the outer cylindrical surface of the hub and on the other side of the cylindrical surface of the hub, this contacts the aperture of the disc.

As further evidence, Watanabe discloses that during STW (para [0057]), a biasing force applied by a biasing tool can certainly have the central mounting aperture of the disc directly contact the outer cylindrical surface of the hub (para [0043]) to simply provide balance to the rotation of the disc, or control the rotational displacement of the disc.

It would have obvious to one of ordinary skill in the art at the time the invention was made that the biasing tool of McKenzie would impart a bias force to the disc member to bring the innermost surface of the central mounting aperture of the disc onto contact with an outer cylindrical surface of the hub, as suggested in McKenzie's Figures 3 and 4 and by Watanabe, to align the disc and provide balance.

With respect to Claims 21 and 31, it is unclear whether or not McKenzie's steps of imparting the first bias force and imparting the second bias force are done "concurrently". However, it would have obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of McKenzie by imparting the first and second bias forces "concurrently", at least to the extent of performing the very same function of aligning all of the disc members with the hub, thereby saving manufacturing time.

**Claims 22, 23, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKenzie et al in view of Watanabe et al, as applied to Claims 19, 21, 30 and 31, and further in view of Yoo et al 6,971,154.**

Art Unit: 3729

McKenzie, as modified by Watanabe, discloses the claimed manufacturing method as relied upon above in Claims 19, 21, 30 and 31. However, the modified McKenzie method does not teach concurrently deflecting first and second biasing members.

Yoo teaches a disc member aligning process that includes a main body portion (e.g. 230 in Fig. 6) that advances toward a central axis of a disc member and concurrently and independently deflects first and second biasing members (e.g. 241, 243, col. 5, lines 3-26). The purpose of the main body portion and first and second biasing members of Yoo is to balance and align disc members (col. 2, lines 29+).

Therefore, it would have obvious to one of ordinary skill in the art at the time the invention was made to have modified the main body portion of McKenzie by adding the first and second biasing members, as taught by Yoo, to advantageously balance and align each disc member.

### ***Response to Arguments***

The applicant(s) arguments with respect to Claims 19 and 30, have been fully considered, and have now been answered in the above rejection with the broad interpretation of “axially aligned”.

**NOTE:** It appears that if the applicant(s) were to amend each of Claims 19 and 30 to further recite at the end of each claim: --thereby forming a common rotational axis for the hub and the center or rotation of the track--, this would better clarify the phrase of "axially aligned" and would appear to define over the art.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:15 am - 4:45 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/A. Dexter Tugbang/  
Primary Examiner  
Art Unit 3729**

August 17, 2009